May 26, 1956

Dear Herman:

Thanks to you and Kurahashi for the current data. I am still concerned about the implication that the galactose enzymes are constitutive, rather than adaptive: this may come from the use of casein-digest medium, which almost certain contains residual traces of lactose, and hence possibly sufficient galactose to induce the enzymes; you should find higher activities with "induced" cells by the procedure I wrote earlier, and this may be helpful in detecting the pyrophophate transferase.

I am sorry if I have not clearly answered your question before about the distinction of the different Gal mutants. They can all be distinguished by crossing, e.g., $Gal_1^- Gal_2^+$ x $Gal_1^+ Gal_2^-$ gives $Gal_1^+ Gal_2^+$ (hence galactose-positive) recombinants with a frequency of about 0.1% of total recombinants. Similar experiments by transduction give the same result. These data are not yet published, except in an abstract, but are in a paper now in press.

ransfusion?

Your letter must have some typing errors: what does "transconfiguration" mean? Also what is the "incomplete PGal enzyme": are you speculating that the galactosemic infants produce a protein corresponding to the enzyme, but lacking its specific activity?

We will try, if possible, to visit Bethesda the weekend after the Hopkins meeting, and hope you will be available for a more leisurely discussion.

Yours sincerely,

Joshua Lederberg